

REMARKS

Reconsideration of the Final Office Action of May 27, 2008 is respectfully requested.

Accompanying this Amendment is a one-month Petition for extension of time together with the requisite small entity fee.

In the Office Action claims 3, 4 and 8-24 have been rejected under 35 U.S.C. 103(a) as being unpatentable of Sickles '482 in view of Walberg and Binoche.

In that rejection it is indicated that Sickles '482 is considered to disclose aspects of the invention but is acknowledged as being deficient by way of reference to, for example, the secondary references to Walberg (newly cited) and Binoche. More specifically, in recognition of the failure of Sickles to show the electrode arrangement and insulation arrangement for the electrodes as set out in claim 3, there is set forth the following:

“Walberg teaches a coating spray gun comprising an air cap 34 having a pair of projections in which an electrode is located in one of the projections (Figure 3) and Binoche teaches an electrostatic coating spray gun comprising insulated electrodes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Sickles '482 placing electrodes in the projections since such arrangements have been taught by Walberg and by providing insulated electrodes as has already been taught by Binoche.”

This attempted combination is respectfully traversed as not being in compliance with 35 U.S.C. 103 based on the below discussion.

The Applicant has amended claim 3 to indicate the insulatively shielded electrodes have respective distal ends covered by the projections. Thus, in the claimed invention, insulatively shielded electrodes are accommodated in the interior of the projection. This is seen from the recitation of “a pair of insulatively shielded electrodes accommodated in interiors of the respective projections” and the recitation of “the insulatively shielded electrodes having respective distal ends covered by the projections and those insulatively shielded electrodes have respective distal ends covered by the projections.”

A review of the relied upon references reveals that these references fail to disclose or suggest in any fashion the claimed electrode and insulation arrangement as described above for claim 3. In Sickles, the semi-cylindrical electrode ring structures 110 and 112 are specifically

arranged as to have their inner interior surface exposed relative to the more central electrode 150. Further, semi-cylindrical electrode rings 110 and 112 are designed to be generally commensurate with the level of the central electrode (see col. 21, lines 22 to 26). As further explained in col. 22, lines 8-13 of Sickles, this arrangement provides the following perceived benefits:

“No electrode structure extends forward of the air horns or behind the air cap so that the improved structure is easy to use, replace, and clean, is low in manufacturing costs, is compact, reliable, and durable, and has very low capacitance so that problems due to sparking and arcing are reducing.”

The secondary reference to Walberg relied upon in the obviousness rejection discloses an electrode 150 provided in a projection as shown in Fig. 3 (the Fig. referenced by the Examiner in the rejection). In Walberg, however, only a proximal end of the electrode 150 is provided in an interior of the projection, and a distal end of the electrode 150 extends outside the projection to be exposed. Moreover, that projection, out from which electrode 15 extends, is itself formed of a conductive material. That is, as set forth in col. 7, lines 49-55 of Walberg:

“In FIGS. 3-5 the fluid tips and air caps as illustrated are constructed of electrically conducting material such as steel or other metal. A metal needle 150 serves as the ionizing electrode. In the absence of the needle the sharp corners of the metal air horns will serve as charging electrodes.”

Thus, Walberg discloses a spray gun of the external electrification type in which electrodes are provided on the outside of the spray gun body. In this case, both electrode and projections are electrified so as to have the same polarity. Thus, the assertion that it would have been obvious to modify Sickles to have an arrangement such as Walberg (with its protruding ionization needle extending from the conductive cap arrangement) is respectfully submitted to be an improper assertion under 35 U.S.C. 103, particularly since the base reference to Sickles specifically teaches away from such an arrangement with its “compact” design. Furthermore, the noted major deficiencies in the combination of Sickles and Walberg are not remedied by the Binoche reference. In the first place, Sickles specifically sets up its interior semi-cylindrical electrode surface to be exposed relative to the more internal central electrode to achieve the described level of induction therebetween. Secondly, the teaching of Walberg describes an all

metal cap structure in Figs. 3-5 in place of the plastic cap structure in the other embodiments of Walberg to provide, for example, the above-noted desired polarity in Walberg.

Thirdly, a review of Binoche indicates that its "insulation" is directed only at insulating the base of the electrodes as best evidenced by Fig. 9 which shows highly exposed electrodes E1 and E2 having significant portions extending radially far inward from the cap.

In view of the above-described serious defects in the attempted combination of Sickles in view of both Walberg and Binoche, it is respectfully submitted that claim 3 and its dependants are in immediate condition for allowance. Furthermore, because of these deficiencies relative to the asserted art and the insulated arrangement of the insulated, non-central electrode received in the air cap projection claimed in withdrawn claim 5, that independent claim 5 is also respectfully submitted to be in immediate condition for allowance.


In view of the foregoing amendments and remarks, it courteously is urged that all of the remaining claims are allowable and that this application is in condition for allowance. Favorable action in this regard earnestly is solicited. The Examiner is invited to contact the undersigned if desired.

Also, if any fees are due in connection with the filing of this amendment, such as fees under 37 C.F.R. §§1.16 or 1.17, please charge the fees to Deposit Account 02-4300; Order No. 034206R002.

Respectfully submitted,

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